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Fiscal Incentives on Rural Teachers: What Can China Learn From America?

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Abstract

To solve the problem of rural teacher supplement, many states had explored a variety of fiscal incentive measures under the guidance of federal policies, and these measures have achieved success in some degree, but problems like the deficiency of project design and the inadequacy of compensation led to poor results. The experience of the U.S. will benefit China in the following aspects: Providing financial rewards to rural teachers is necessary, but the amount of incentives should be scientific estimated to ensure its attractiveness; moreover, to improve the capital efficiency, the project design should pay attention to risk prevention; In addition, fiscal incentives should be used with non-fiscal incentives.

Key words: America; Rural teacher supplement; Teacher recruitment; Teacher retention; Fiscal incentives

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INTRODUCTION

In China, the imbalance of teachers resources between urban and rural areas results in the sharp disparity of teaching education between different areas (Lu, 2013). Therefore, narrowing the gap of faculty condition between urban and rural areas becomes essential in the process of integration of urban and rural education (Chu, 2010).

However, in terms of the supplement of rural teachers, nowadays mainland China is still beset with difficulties, and it is hard for rural schools to recruit new teachers, because of the weak policy on improving treatment of rural teachers (Wang, 2014).

Many countries have adopted fiscal incentives to encourage teacher retention in rural areas (McEwan, 1999), such as a range of fiscal incentives on rural teacher supplement is taken by the states of America. China also pointed out that “our policies should be appropriate to rural schools, especially to those in harsh conditions”¹. In 2013, CPC Central Committee issued a document requiring that local governments should undertake the task of providing rural teachers with living subsidies, with additional awards offered by the central government². But by March, 2014, only 1/3 of the involved counties had carried out that policy, and among them, the subsidy rate merely reached 31% coverage with comparatively a low subsidy standard of 258 yuan per person per month³. In general, there still exist many problems in the application of fiscal incentives on rural teacher supplement. Hence, learning from the implementation and the effect of American fiscal incentive policy on rural teacher supplement will benefit a lot of China in terms of solving similar problems.

¹ Office of the State Council: “Notice on Office of the State Council Transferring Guidance Opinions on Implementing Merit Salary in Compulsory Education Schools Issued by the Ministry of Human Resources and Social Security, the Ministry of Finance and the Ministry of Education.” Retrieved from <http://fgk.chinalaw.gov.cn/article/fgxwj/200812/20081200105602.shtml>

² The Ministry of Finance and the Ministry of Education. (2013). Notice on the implementation of the Central Document No. 1 in 2013 to give out living allowance to rural teachers working in contiguous poor areas. Retrieved from <http://jldjcxq.30edu.com/Article/60b42207-a470-40f1-be32-ccdc2e64167c.shtml>

³ Office of the Ministry of Education. (2014). Bulletin on the implementation of the 2013 rural teachers living allowance project in destitute areas. Retrieved from http://news.ifeng.com/gundong/detail_2014_03/26/35165128_0.shtml

1. AMERICAN FISCAL INCENTIVE POLICY ON RURAL TEACHER SUPPLEMENT

American government attaches importance to fiscal incentives on rural teacher supplement, which can be shown from many education laws and regulations. Although each state also has its relative regulations. This essay mainly introduces federal policies on account of space limitation.

1.1 Principles of Universality

Since the latter part of last century, fiscal incentive policy on rural teacher supplement has been involved in a number of education laws enacted by the U.S. government. For example, according to National Defense Education Act enacted in 1958, if the students who intend to be an elementary or secondary school teacher are in the colleges that participate in the student loans program of the Act, they are able to ask for a loan of \$1,000 each academic year, with a maximum loan of \$5,000. If the borrower finally becomes a teacher, he/she can enjoy an exemption of 50% of total payments (Zhang, 2009). The 1998 revised version of Higher Education Act proposes that an effective mechanism should be made and implemented to ensure the smooth recruitment of high-quality teachers for local educational institutions and schools, and the fiscal incentive should be taken to reward excellent teachers and principals⁴. In 1991 President Bush issued American 2000: An Education Strategy, which proposes to award President Scholarship to the teachers with excellent teaching achievement and to carry out high-salary policy on excellent teachers and teachers in harsh and remote regions. No Child Left Behind, NCLB issued in 2002 is the new revision of the 1965 Elementary and Secondary Education Act, ESEA. The second item of NCLB puts forward the aim of cultivating, training and hiring high-quality teachers; and in items about education accountability, it makes clear division of relative responsibility among the federal, the state, and the school, which requires the State educational agency shall bear the responsibility administration of funds, while local educational agencies shall be responsible for the design of programs⁵.

1.2 Special Clauses on Rural Teacher Supplement

Apart from national policies, in America there are also some special clauses on rural teacher supplement. One of the most influential clauses is Rural Education Achievement Program, REAP of NCLB. This program is composed of two sub-programs, i.e., the Small, Rural School Grant Program, SRSA and the Rural and

Low-Income School Program, RLIS. According to its regulations, those who receive funding from these two sub-programs can use this sum of money on improvement of teacher quality and on teacher supplement⁶. Besides, 2009 American Recovery and Reinvestment Act propose that federal and state governments should offer various fiscal incentives such as housing allowances and loans, and the payroll tax cut, in order to attract more teachers to work in rural areas⁷. And offering high salary to teachers working in harsh areas is mentioned in United States in 2000 Education Strategy, in which "harsh areas" mainly refer to remote countryside areas.

2. FISCAL INCENTIVE MEASURES ON RURAL TEACHER SUPPLEMENT

Under the guidance of federal policy, to help the areas short of teaching staff American states and local school districts also take a bunch of policies and measures, the majority of which benefit rural areas. Based on the beneficiary's occupation, the fiscal incentive methods can be roughly classified as follows.

2.1 College Scholarships for Prospective Teachers

Teacher supplement starts with pre-service training. To attract more people devoting to teach career, many states in the U.S provide prospective teachers with college scholarships. Although some of college scholarship programs do not specifically target countryside, there are still a number of programs targeting areas of severe shortage of teacher or schools with urgent demand for teachers, which include a great proportion of rural schools. For instance, State of Connecticut provides service scholarships and loan reduction program to appeal to high-quality candidates, and it also has incentive measures for schools with demanding teaching standards and for disciplines lacking teachers (Hammond & Ducommun, 2011). Mississippi has carried out college scholarship program as well, providing scholarships for those intending to obtain a master degree in education or a professional doctor degree of education in Mississippi high education institutions, on condition that they would teach in the regions short of teachers for three years, and this policy gives priority to applicants who are willing to move from Mississippi or from other states to teach in the places which is identified as acute teacher shortage areas by the state board of education⁸.

North Carolina's Teaching Fellows Program is the

⁴ U.S. Department of Education. (1998). *Higher Education Amendments of 1998*. Retrieved from <http://www2.ed.gov/policy/highered/leg/hea98/sec201.html>

⁵ U.S. Department of Education. (2002). NO CHILD LEFT BEHIND. Retrieved from <http://www2.ed.gov/nclb/landing.jhtml>

⁶ U.S. Department of Education. (2002). *Rural "Education Achievement Program"*. <http://www2.ed.gov/nclb/freedom/local/reap.html>

⁷ The American Recovery and Reinvestment Act: Opportunities and Strategies to Advance Teacher Effectiveness Part 2. <http://www.tqsource.org/publications/December2009Update.pdf>, 2011-04-06.

⁸ THE UNIVERSITY OF MISSISSIPPI. (1998). *Mississippi Teacher Fellowship Program*. Retrieved from <http://mtfp.olemiss.edu/>

representative of various college scholarship programs. With rural population accounting for over 50%, North Carolina has one of the largest rural population in America. Its Teaching Fellows Program was founded in 1986 to cope with the problems like an increasingly severe shortage of teachers, especially the difficulty in recruiting rural teachers⁹. This program each year fund 500 freshmen and offers a scholarship of \$6,500 per year, lasting for four successive years. The scholarship recipients are required to teach in the local state for four years, and if they breach the contract, they have to repay their scholarships in the form of loans with additional 10% interest. Candidates who want to take part in that program should pass a series of selections and interviews held by local and school district institutions. Academic performance and consideration of diversity (more attention are paid to males and minorities) are essential in the selection process (Henry, Bastian & Smith, 2012), with the priority given to students from rural counties¹⁰.

2.2 Rewards and Funding for New Teachers

Offering certain rewards and funding to new teachers in teacher recruitment is also an effective way to attract people to teach in the countryside. There are two major methods.

2.2.1 Signing Bonus

Signing bonus programs are very common in America, and most of them are conducted by the state government, with some launched by city or local authorities (Jimerson, 2003). Among these programs, some are directed at disadvantaged urban schools, some aim at the state-wide schools with difficulty in teacher recruitment, and others set various standards in the light of the conditions of students (such as the impoverished undergraduates or students with poor academic achievement). Rural schools can basically benefit from all the rest of the programs except those targeted disadvantaged urban schools.

In Arkansas, there are a great proportion of rural schools which account for more than half of the whole public schools (Johnson, Showalter, Klein, & Lester, 2014). Therefore, supplement of rural teachers becomes a formidable task. To attract more teachers to teach in those teacher shortage areas, Arkansas authority has implemented High Priority Bonus Incentives. By its terms, high priority is given to the school districts with less than 1,000 students among whom 80% or above qualify for free or reduced-price lunches according to National School Lunch Act. New teachers in such districts are able to get an one-off bonus of \$ 5,000 by the end of their first teaching year, and \$4,000 when they have finished their second and their year teaching task, and \$3,000 in the

following two years. In 2009 those bonuses are increased by 1,000 dollars. Statistics show that during the 2008-2009 academic year, in total a bonus of \$1,586,000, with an average of \$3,189 for each person, was awarded to those teaching in the areas or disciplines with inadequate teachers (Robert & Shuls, 2012).

2.2.2 Loan Reduction

Some rural schools offer loan reduction programs to new teachers. Generally the school district will pay off the entire or a part of the student loans or other debts for beginning teachers. The school district will contact the lending institution to which new teachers are the clients in order to help those teachers reduce interest or arrange loan consolidations, or will seek local trustee agency for assistance (Lowe, 2006). Some nonpublic non-profit sponsors also provide loans or loan reduction programs, for example, the program of "Pathway to Teaching" held by DeWitt Wallace provides tuition assistance and support; "Teach for America" and the Ford Foundation offer similar support as well. Among a range of such programs in many states of America which aim at both countryside and other areas, the one of Mississippi is specially set for rural areas, and Minnesota's program targets Native Americans and the minorities (Jimerson, 2003).

2.3 Rewards and Grants to In-Service Teachers

To better attract and retain teachers in rural areas, states and school districts provide wages and welfare raises as well as all sorts of grants to in-service teachers. And the beginning teachers are also included in such welfare policy. There are two typical types of methods:

2.3.1 Targeted Bonus

Faced with the difficulties of recruitment and retention of teachers at special posts, many American states have special measures for raising wages and welfare, which are mainly realized through targeted bonus. During 2001-2004, North Carolina had offered a bonus of \$1,800 per year to eligible teachers. This program is open to certified teachers in mathematics or sciences or special education who teach in public high schools where there is impoverished students or students with poor academic achievement. Teachers who are qualified for teaching in one of the above three disciplines can obtain the bonus, even if their schools are no longer eligible. Teachers who stay in the eligible schools but give up teaching in the above subjects are no longer qualified for the bonus. The statistics show that over a period of three years, altogether 1,992 students had obtained this bonus (Clotfelter, Glennie, Ladd, & Vigdor, 2008). Although this program does not directly aim at rural areas, 2/3 of 115 school districts belong to countryside (Verdin & Smith, 2013). Hence teachers from rural areas, which have a higher poverty rate than other region, are bound to benefit from this program.

⁹ Public School Forum of North Carolina. (2015). A legacy of inspired educators: A report on the North Carolina Teaching Fellows Program 1986-2015.

¹⁰ Ibid.

Besides, in 2009 Arkansas launched a program called State Teacher Education Program, STEP, which offers rewards to eligible teachers. If a teacher has been taught for three years in the teacher shortage discipline or region defined by the state's Ministry of Higher Education and Ministry of Education, he/she can get a reward of \$3,000 each year; and if he/she is a national minority teacher, he/she can obtain \$1,000 more each year. According to figure, during 2009-2010, 188 schools in 54 school districts over the state were identified as schools in Geographical Shortage Districts, GSD, and eligible teachers were all rewarded by rule (Robert & Shuls, 2012).

2.3.2 Housing Fund or Support

One reason of the high moving rate of rural teachers lies in lacking suitable housing (Clotfelter, Glennie, Ladd, & Vigdor, 2008). Thus, providing suitable housing becomes a way of rewards to rural teachers, which are being practiced by some rural school districts (Verdin & Smith, 2013). The housing is either provided for free or for a nominal monthly rent. An outstanding rural school in East Texas is carrying out a strategy which promises to provide low-cost houses for rural teachers in some way (Lowe, 2006). Mississippi also has a similar program with the goal of providing interest-free loan housing for certificated teachers in regions with a critical shortage of teachers (CAHAPE, Hughes, McClure, Reeves, & Salgado, 2005), while Teacher Housing Development Foundation passed by Arkansas state council is also a housing assistance which is offered to teachers in high priority region¹¹, according to the Arkansas' Law on Teacher Housing Development, with of course a number of requirements for the applicants of the programs and for housing standards (Robert & Shuls, 2012).

3. THE ANALYSIS OF THE EFFECTS OF FISCAL INCENTIVE MEASURES

Empirical studies show that fiscal incentives sometimes are successful while sometimes are not so satisfying in solving the problem of rural teacher supplement.

3.1 Fiscal Incentives' Positive Effects on Rural Teacher Supplement

Financial incentives have some positive effects on rural teacher supplement mainly shown in the following two aspects.

3.1.1 Supplying a Certain Number of Excellent Teachers

To take North Carolina's Teaching Fellows Program as an example, its competitive scholarships attract more students with higher academic achievements to take a job in teaching, and most of them go to teach in rural schools or teach those impoverished urban students.

Since the program takes priority in students from rural counties where possible, the rate of graduates teaching in rural regions hence has increased. During the 2013-2014 academic year, tens of rural counties in North Carolina each hired over 20 teaching fellows, with some hiring twice or three times more or even more than this figure. A 1995 research reports that 55% of teacher fellows were in rural areas. Moreover, compared with teachers trained in other traditional or nontraditional programs (such as alternative route), students taught by teaching fellows achieve a more distinguished improvement, no matter in primary school mathematics or middle school mathematics or any high school course¹². The success of this program may related to generous scholarships, strict selection of the candidates, and its attention to the formation of participants' professional skills and spirit through some special activities which also strengthens the sense of mission in teaching (Henry, Bastian & Smith, 2012).

The Governor's Teaching Fellowship implemented in California also achieved success. This program offers a bonus of \$20,000 to teachers in the schools with poor academic achievements, leading to a rise of 28% in the numbers of the new teachers who are willing to take a job in the schools with low academic achievements (Robert & Shuls, 2012).

3.1.2 Playing a Role in the Retention of Rural Teachers

Implementation of fiscal incentives programs has played a role in improving the retention rate of rural teachers, which can be exemplified by two fiscal incentives plans in North Carolina. The targeted bonus plan carried out in North Carolina has led to a decline in mobility ratio of the targeted teachers (the numbers drop by 17%), despite of the not high annually bonus of \$1,800; and the experienced teachers have showed the strongest response to this plan (Clotfelter, Glennie, Ladd, & Vigdor, 2008). In Teaching Fellows Program, the retention rate of the bonus receivers is relatively higher, and compared to teachers in other programs, they are more likely to teach in a public school for five years or more (Wheeler & Glennie, 2007).

3.2 The Limitations of the Fiscal Incentive Measures

Although some good results have been achieved, it is found that the fiscal incentives do not always work in practice.

3.2.1 Limited Effects of Comparatively Lower Rewards

Several programs like priority regions bonus program carried out in Arkansas are not very successful, due to inadequate appeal of the bonus. As mentioned above, the priority regions bonus is merely about \$3,000 on average, while the average income of the teachers from non-

¹¹ As for the definition of "high priority region", refer to previous context about the program of High Priority Bonus Incentives.

¹² Public School Forum of North Carolina. (2015). A legacy of inspired educators: A report on the North Carolina Teaching Fellows Program 1986-2015.

geographic teacher shortage areas is \$6,500 higher than the income of those from teacher shortages regions (Robert & Shuls, 2012). In light of the difference, the bonus will be more appealing if it at least double the given salary.

As for teachers retention, the targeted bonus plan of North Carolina did work to some extent, but 80% of the school districts officers interviewed believe that the bonus of \$1,800 is far from enough to encourage teachers moving to qualified schools (referring to impoverished schools or schools with low examination results), and most of them claim that they do not see any evidence showing that teachers transfer as a result of this program (Clotfelter, Glennie, Ladd, & Vigdor, 2008).

3.2.2 Pure Financial Incentives Failing to Attract Required Teachers

Researches show that money is necessary but not sufficient in teacher recruitment. For instance, South Carolina once tried to recruit professors and teachers for disadvantaged schools by providing a bonus of \$18,000, but this program only recruited 20% teachers of its original plan (500 people), and only recruited 40% of the planned numbers after three years. According to the interviews with some education officials, some candidates are not qualified for teacher and others did not move to schools with urgent demand as required on account of various reasons such as bad geographic location, insufficient support in supervising, poor working conditions and so on. (Berry, Rasberry, & Williams, 2007)

4. THE PROBLEMS

Although America government has paid some attention to fiscal incentives on rural teacher supplement, and although some states have taken some effective measures, there still exist many problems, shown from the following perspectives:

4.1 The Lack of Targeted Policies

In terms of national policies in America, regardless of many fiscal incentives regulations and rules on teacher supplement, special policies targeted rural areas are still insufficient. Allowing for the particularity of rural teachers' working and living conditions and their targeted students, it will be hard to change rural schools' inferior position in the competition of teacher resources without targeted fiscal incentives.

4.2 Project Design Needing to Be Improved

Undeniably, above various fiscal incentives programs in general contribute to rural teacher supplement, but they also have some deficiencies in terms of the design. To take \$1,800 targeted bonus program implemented in North Carolina as an example, its low amount of incentive payment, the narrow coverage on the crowd size, the inappropriate release time of relative announcements--applicants do not know about qualified schools or which

candidates could teach the optional disciplines until the recruiting season is over, all are against recruiting new teachers by program funding. This state's Teaching Fellows Program demands further perfection as well. This program makes only 55% of the receivers of its generous scholars work in rural schools, leading to insufficient contribution to rural teacher supplement. It is because no limit is put to the regions where teaching fellows are going to stay; the program could have set certain requirements to those targeting rural areas, but it only requires teachers teach in any of the public schools in the state¹³.

Other programs, however, are at the risk of wasting money due to the bugs in the design. A scholarship program in Illinois is the case. This program offer scholarship to students studying in disciplines lack of teachers, aiming to encourage receivers to teacher in high-demand schools. Nonetheless, many scholars believe that although this program has attracted participants, its main role lies in assist with getting teacher certification, and hence its design does not target students who are really willing to teach in schools with high demand and consequently the potential numbers of the teachers in this type of public schools will not necessarily increase. (Liou, et al., 2010)

4.3 The Lack of Studies on the Effects of Policy Implementation

Lots of articles in America point out that, although a large number of evidences show that fiscal incentives are applied to teacher recruitment and retention, few relative policies or programs are formally studied or assessed, and today few studies can provide empirical data to support the efficacy of these programs. Either the federal program or the state program, it lacks a management information system that offers policy-makers relative statistics to assess the efficacy of the program (Berry, Rasberry, & Williams, 2007; Weinstein, 2009). Less information can be obtained if we search research papers and other references about sample projects and their practices by keywords "rural-special" and "success"; Lorna Jimerson, the policy analyst of the American organization Rural School and Community Trust also believes that the information of "rural-specific" is deficient (Wheeler & Glennie, 2007). Obviously, the deficiency in studies on the effects of policy implementation brings an impediment to a more comprehensive and thorough discussion of the pros and cons and the improvement of relative measures.

5. WHAT CAN CHINA LEARN FROM THE AMERICAN EXPERIENCE

Overall, the measures of fiscal incentives on rural teacher supplement carried out in American have made some

¹³ Public School Forum of North Carolina. (2015). A legacy of inspired educators: A report on the North Carolina Teaching Fellows Program 1986-2015.

achievements as well as having some problems. Also beset by the problems of deficiency in rural teachers, China can learn a lot from the American experience. The following aspects are what Chinese government should pay attention to:

5.1 More Attention Should Be Paid to Fiscal Incentives on Rural Teacher Supplement

The Practices of America shows that being used properly, fiscal incentives indeed can ameliorate the situation of teacher shortages in rural areas and can attract more excellent teacher to work in the countryside. Nowadays, Chinese government also realizes the importance of fiscal incentive, but we still do not take enough consideration of offering compensation to rural teacher in making policies about rural teacher supplement (Lu & Li, 2010). And in spite of repeated emphasis on improving the treatment of rural teachers in “The Notice of the General Office of the State Council on Issuing the Rural Teacher Support Program (2015-2020)” (SCS (2015) No. 43)¹⁴, this notice only provides broad guidance on how to improve the treatment of rural teachers essentially, and the implementation of this notice still remains uncertain without fixed tasks, which show that present policies are still rough and immature. Therefore, Chinese government should enhance research on rural teacher supplement policy, make practical incentive projects and do follow-up studies to enhance the effective implementation of fiscal incentives.

5.2 The Financial Amount of Fiscal Incentives should be Rational and Attractive

Many researches indicate that financial rewards add the attraction of the teaching positions with recruitment difficulty, however, these research also leave a lot of questions in suspense, especially the question of “how much is enough” (Berry, Rasberry, & Williams, 2007). In fact, low bonuses are much less appealing, and the program of Arkansas and North Carolina’s targeted bonuses of \$1,800 are the cases. Comparatively, the Teaching Fellows Program in North Carolina that provides an annual bonus of \$6,5000 to teach fellows is much more successful, which indicates that the effects of the programs to some extent may depend on the amount of bonus. Nonetheless, the standards of the exact amount of incentives should be various, based on actual conditions of teaching regions and the actual goals of different programs. In addition, we should also consider that how important are the incentives may not mean the same to teachers at different career stages.

In China, economic conditions and social development level vary in different rural regions, and people with

various families backgrounds have diverse requirements of compensation in target teaching areas, so these factors should all be taken into consideration when implementing fiscal incentives in order to specify the amount of the reward or bonus.

5.3 Designing the Program Scientifically to Increase the Efficiency of Fund Utilization

The above analysis show that the inappropriate program design will bring risks, resulting in the failure of achieving the goal or the waste of money. In China, due to the deficiency in design, some special teacher supplement programs face the problem of insufficient contribution to ameliorate the teacher shortage. For example, the implementation of Free Education of Normal Schools Students Program does have positive effects in many respects (Shen, 2007). However, it overlooks the ways of encouraging more participants to teach in rural area and as a result, only a low rate of graduates finally stay in the counties to teach in local rural schools (Liu, 2011). Hence, program designers should think about how to use the limited funds in the most effective way.

5.4 Combining Fiscal Incentives With Non-Financial Incentives

The practice of the U.S. suggests that pure fiscal incentives do not necessarily attract the required teachers, because fiscal incentive measures are more about satisfying people’s material needs, whereas unable to attract those who put their spiritual satisfaction in priority. In China some teachers are unwilling to teach in the countryside no matter how high the rewards are, for they find it hard to accept the huge rural-urban differences. What is more, fiscal incentives require powerful public finance support, otherwise they will be unsustainable, just as the low bonus of some American programs is related to lack of money. As the introduction part shows, the project of offering rural teachers’ living subsidies to connected extremely impoverished regions in China still faces some problems—only a few rural teachers benefit from it with a very low subsidy amount; one of the causes, similarly, lies in the financial pressure. Thus, only by turning to the close combination of financial incentives and non-financial incentives, can we achieve better outcomes in rural teacher supplement.

REFERENCES

- Azaria, V., & Smith, R. (2013). *The impact of housing on teacher recruitment and retention in rural areas: A case study*. Rural School and Community Trust.
- Barnett, B., Rasberry, M., & Williams, A. (2007, January 11). *Recruiting and retaining quality teachers for high-needs schools: Insights from NBCT summits and other policy initiatives*. Retrieved from <http://www.teachingquality.org>
- Cahape, H. P., Hughes, G., McClure, C., Reeves, C., & Salgado, D. (2005). *Rural teacher recruitment and retention*

¹⁴ The Web of The Central Government of the People’s Republic of China: “Notice of the general office of the State Council on Issuing the rural teacher support program (2015-2020).” Retrieved from http://www.gov.cn/zhengce/content/2015-06/08/content_9833.htm

- practices: A review of the research literature, national survey of rural superintendents, and case Studies of programs in Virginia*. Appalachia Educational Laboratory.
- Chu, H. Q. (2010). Reformation of educational system and the integration of urban and rural education—Breaking Dual structure of urban and rural education. *Educational Research*, (11), 3-11.
- Clotfelter, C., Glennie, E., Ladd, H., & Vigdor, J. (2008). Would higher salaries keep teachers in high-poverty schools? Evidence from a policy intervention in North Carolina. *Journal of Public Economics*, (92), 1352-1370.
- Clotfelter, C., Glennie, E. J., Ladd, H. F., & Vigdor, J. L. (2008). Teacher bonuses and teacher retention in low-performing schools: Evidence from the North Carolina \$1,800 teacher bonus program. *Public Finance Review*, (36), 63-87.
- Darling-Hammond, L., & Ducommun, C. E. (2011). *Recruiting and Retaining Teachers: What matters most and what can government do?* Retrieved from <http://www.forum for education.org/news/recruiting-and-retaining-teachers-what-matters-most-and-what-can-government-do>.
- Henry, G. T., Bastian, K. C., & Smith, A. A. (2012). Scholarships to recruit the “best and brightest” into teaching: Who is recruited, where do they teach, how effective are they, and how long do they stay? *Educational Researcher*, (41), 83-92.
- Jimerson, L. D. (Ed.). (2003). *The competitive disadvantage: Teacher compensation in rural America*. Washington DC: The Rural School and Community Trust.
- Johnson, J., Showalter, D., Klein, R., & Lester, C. (2014). *Why rural matters 2013-14*. Rural School and Community Trust.
- Justin Wheeler, M. P. P., & Elizabeth Glennie, E. (2007). *Can pay incentives improve the recruitment and retention of teachers in America's hard-to- staff schools?* Center for Child and Family Policy, Duke University.
- Liao, C. H. (2006). The Influence of Country in Crisis on America Education. *Journal of Mudanjiang Normal University*, (2), 95-96.
- Liou, P.-Y., et al. (2010). Perceived effects of scholarships on STEM majors' commitment to teaching in high need schools. *Science Teacher Education*, (21), 451-470.
- Liu, J. (2011, November 11). The first survey on free-charge normal school students in Shanxi: How long they are willing to stay there. *Shaanxi Daily*.
- Lowe, J. M. (2006). Rural education: Attracting and retaining teachers in small schools. *Rural Educator*, 27(2), 28-32.
- Lu, J. Z., & Li, L. (2013). The inspiration from foreign countries' studies on the difference of teachers compensation to rural teacher supplement in China. *Journal of Inner Mongolia Normal University (Educational Science)*, 26(4), 61-63.
- Lu, S. J. (2013). A survey on and an analysis of the gap of teaching level between urban teachers and rural teachers—A study based on the research on urban and rural teachers in Zhejiang province. *Global Education Outlook*, (6), 88-95.
- Maranto, R., & Shuls, J. V. (2012). How do we get them on the farm? Efforts to improve rural teacher recruitment and retention in Arkansas. *The Rural Educator*, 34(1), 32-40.
- McEwan, P. J. (1999). Recruitment of rural teachers in developing countries: An economic analysis. *Teaching and Teacher Education*, (15), 849-859.
- Shen, G. C. (2007). Meditation on the return of free normal education. *Global Education Outlook*, (6), 21-25.
- Wang, G. M., & Zheng, X. R. (2014). Policy and sociology research on the plight of rural teacher supplement. *Teacher Education Research*, 26(4), 41-45.
- Weinstein, T. L. (2009). Do targeted compensation incentives attract the teachers districts want? *Exploring the relationships between California school districts' salary incentives and teacher recruitment and retention*. Retrieved from <http://ue.ucdavis.edu/explorations/2009>.
- Zhang, X. H. (2009). *The study of U.S. national defense education act in cold war* (p.18). Shandong Normal University.